

AAL w/ Rear Block Kit

Dodge Ram 3500 4WD | 2019-2022

Part #: 012616 & 012617

Rev. 022224



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SAFETY WARNING

BDS Suspension Co. recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known.

Box Kit 012616 and 012617		
Part #	Qty	Description
03897	1	5" Block, Flat, 1/2" offset, Wing - DRV
03898	1	5" Block, Flat, 1/2" offset, Wing - PASS
964381612RB	4	9/16" x 4-3/8" x 16-1/2" Round U-Bolt
or		
964381912RB	4	9/16" x 4-3/8" x 19-1/2" Round U-Bolt
03896	1	Rear Brake Bracket
BP1007	1	Bolt Pack
	8	9/16" Fine High Nut
	8	9/16" SAE Flatwasher
354	1	Bolt Pack
	2	3/8"-16 x 1-1/4" Bolt, Yellow Zinc
	4	3/8" Washer, Yellow Zinc
	2	3/8"-16 Prevailing Torque Nut, Yellow Zinc

Box Kit 113228		
Part #	Qty	Description
113228R	2	Add-A-Leaf
113229R	2	Add-A-Leaf
120600FCP	4	1/2"x6" Center Pin w/Nut

Rear Shocks		
Part #	Qty	Description
85761	2	Rear NX2 Shocks
or		
98224761	2	Rear Fox 2.0

INSTALLATION INSTRUCTIONS

1. Raise the rear of the vehicle, block the front wheels for safety. Support the frame rails with jackstands.
2. Disconnect e-brake cable and reroute the line to give adequate slack in the cable at full droop, reattach once routed for extra slack. (Fig. 1, 2)

FIGURE 1

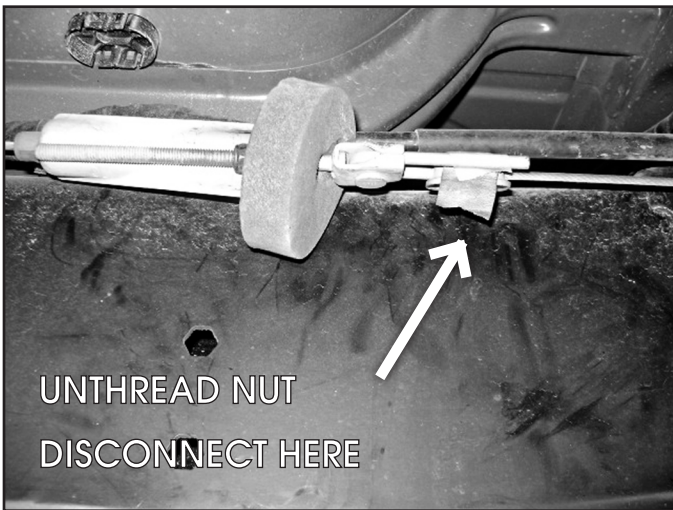
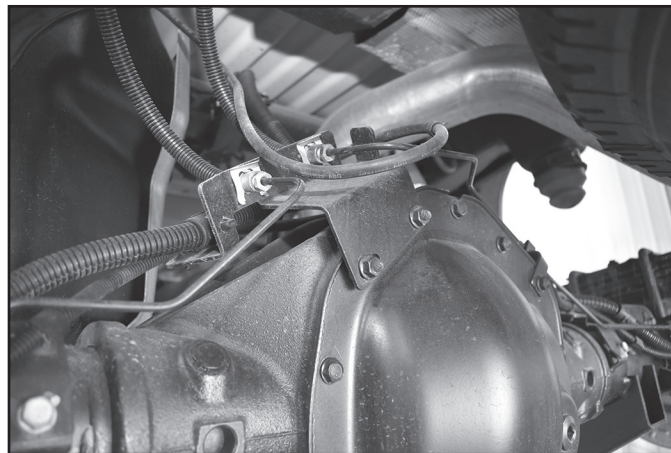


FIGURE 2



3. Remove the factory rear brake line bracket from the differential cover. (Fig 3)

FIGURE 3



4. Remove the factory shocks, retain all mounting hardware.
5. Support the rear axle with a hydraulic jack. Remove the u-bolts and plates from one side of the vehicle only. Loosen the u-bolts on the opposite side slightly, but do not remove.
6. The installation can be performed with the leaf springs remaining installed in the truck, but extra care must be used to ensure that cables / wires / breather are not over extended.
7. Lower the axle on the side with the u-bolts removed.
8. Trim the leaf spring clamps near where they bend over to allow the leaves to be disassembled.
9. Clamp the leaf pack together with c-clamps, remove the dual center pins.
10. Loosen the clamps and allow the leaf pack to disassemble.
11. The leaf right below the main leaf will be replaced with the two AALs. The 2nd leaf from the top is not intended to be reused, however, it is possible to reinstall this leaf if the user desires. (Fig 4))

FIGURE 4



12. Reassemble pack with new leafs with new center pins. Using c-clamps to squeeze the leaf back together. (Fig 5, 6)


FIGURE 5



FIGURE 6

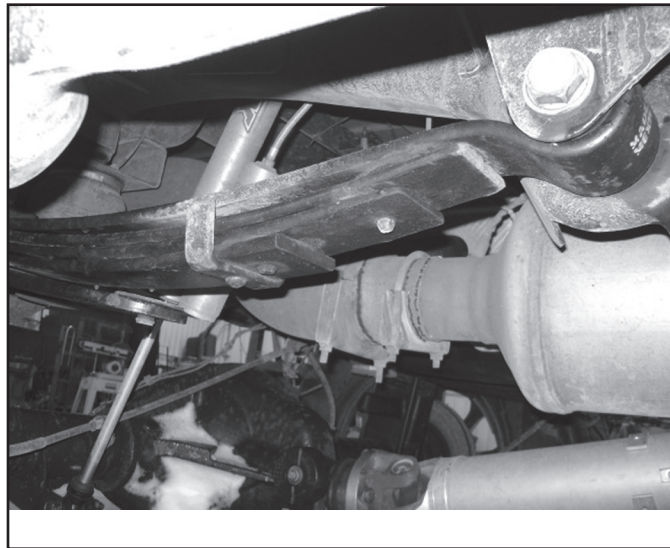


13. Lower axle enough to install new block with the bump stop wing facing in and offsetting the axle forward. If installing air bags, the wing will need to face towards the caliper side of the wheel to allow for clearance while offsetting the axle forward..
14. Raise the axle to the spring while aligning the center spring pin to the hole in the block.
15. Install the new u-bolts and snug the assembly together. Final u-bolt torque should be done with the weight of the vehicle on the springs.
16. Repeat the procedure on the driver's side.
17. Grease bushings and sleeves, install them into both ends of the shocks with factory hardware. Tighten to 60 ft-lbs. If installing optional Fox Shocks, the body will be located at the frame mount.

 **Tip** *Rear shock numbers are Fox98224761 or 85751*

18. Mount the supplied rear brake line bracket to the rear diff with factory hardware. Torque to 12 ft-lbs. Using the 3/8" hardware supplied in bolt pack 354, mount the factory bracket to the supplied bracket, torque to 26 ft-lbs. (Fig 7)

FIGURE 7



19. Reinstall wheels, torque to specification.
20. Lower the vehicle to the ground.
21. Torque the u-bolts to 100-120 ft-lbs.

POST-INSTALLATION

22. Recheck all hardware, check again at 500 miles, and again at regularly scheduled maintenance intervals. Check Brake lines for proper clearance.
23. These trucks can have a vibration from the factory under load and at extremely low RPM's (less than 1200 RPM's), the vibration can become more apparent after lifting the rear of the truck. There is an optional rear driveshaft spacer kit available (Part# 122007) for the non High-output trucks. This will increase rear driveshaft spline engagement and has been found to reduce vibration in rare instances where a vibration is present.
24. Carrier bearing drop is available separately, and is not included in the kit. Order separately if required.
25. If regularly towing or hauling Recoil bars are recommend (BDS122407, BDS123409)



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For questions, technical support and warranty issues relating to this BDS Suspension product, please contact your distributor/installer before contacting BDS Suspension directly.